

10/500667

DT15 Rec'd PCT/PTO 0 1 JUL 2004

INT 34 AADT

WHAT WE CLAIM IS:

1. A toilet comprising

a toilet bowl having a water outlet,

a first water supply conduit having at least one outlet in the vicinity of an upper region of the toilet bowl,

a second water supply conduit having an outlet in a lower region of the bowl, the outlet of the second water supply conduit oriented to direct water passing therethrough towards the water outlet and against a surface of the toilet bowl,

a water inlet conduit adapted for connection to a pressurised water supply and to channel water to said first and second water supply conduits,

a first flow regulator in said first water supply conduit and a second flow regulator in said second water supply conduit,

a control device configured to operate said first and second flow regulators to control the flow of pressurised water in said first and second water supply conduits to selectively deliver water from the pressurised water supply,

a) via the second water supply conduit to create a venturi effect to evacuate waste and water from the toilet bowl; and

b) via the first water supply conduit to travel along the wall of the toilet bowl to thereby wash and refill the toilet.

2. A toilet as claimed in claim 1, wherein the diameter of the outlet of the second water supply conduit is less than the diameter of the second water supply conduit.

INT 34 ADT

3. A toilet as claimed in claim 1 or claim 2, wherein the control device is operably connected to the flow regulators, such that when the control device is activated to flush the toilet, the control device is configured to operate the flow regulator so that:
- 5
- a) water from the pressurised water supply enters the bowl via the first water supply for a predetermined period of time,
- b) water from the pressurised water supply enters the bowl via the second water supply conduit from the bottom outlet for a predetermined period of time;
- 10
- c) water from the pressurised water supply then re-enters the bowl via the first water supply conduit for a predetermined period of time; and then
- d) water supply to the bowl is shut off, until the control device is reactivated to flush the toilet.
- 15
4. A toilet as claimed in any one of the preceding claims, wherein the water inlet conduit is adapted for connection to a mains water supply having a water pressure of at least 30 PSI.
- 20
5. A toilet as claimed in any one of the preceding claims, wherein the at least one outlet in the vicinity of an upper region of the toilet bowl is/are positioned about the top of the bowl, such that water exiting the outlet or outlets travels around and down the walls of the bowl in a substantially clockwise or anti-clockwise direction.
6. A toilet, as claimed in claim 5, wherein the top outlet or outlets are configured to allow for water to be directed onto the top of the wall of the toilet.
- 25
7. A toilet as claimed in any one of the preceding claims, wherein water exiting the outlet of the second water supply conduit does so through a tapered end portion which increases the velocity of the water and directed it towards the water outlet

ART 34 AMDT

of the toilet bowl at a point on the wall of the toilet bowl approximately 5 centimetres above the outlet of the second water supply conduit such that water and waste are sucked out of the bowl to leave the bowl empty.

- 5 8. A toilet as claimed in any one of the preceding claims, wherein the flow regulators comprise on/off valves.
9. A toilet as claimed in any one of the preceding claims, wherein the flow regulators comprise a solenoid valve having an inlet and two outlets wherein the valve is configured to be capable of:
- 10 a) directing water to either the first or second water supply conduits, and
- b) shutting off the water supply to both water supply conduits.
10. A toilet as claimed in any one of claims 1 to 8, wherein there are provided two flow regulators in the form of separate solenoid valves each having an inlet and an outlet.
- 15 11. A toilet as claimed in any one of the preceding claims, wherein the control device is an electronic timing device.
- 12 A method of flushing a toilet comprising the steps of:
- a) controlling the flow of a pressurised water supply to a toilet bowl,
- b) delivering the pressurised water supply to the toilet bowl so that the pressurised water:
- 20 i) creates a venturi effect to evacuate waste and water from the toilet bowl by being directed towards a water outlet of the toilet bowl and against a surface of the toilet bowl, and
- ii) travels along the wall of the toilet bowl to thereby wash and refill the toilet.

APR 30 2004

13. A method for flushing a toilet as claimed in claim 12, further comprising the steps of:

- 5
- i) providing water to at least two top outlets for a predetermined period of time, wherein the top outlets are positioned at the top of the toilet bowl to direct water onto the wall of the toilet bowl,
 - ii) providing water to at least one bottom outlet for a predetermined period of time wherein said bottom outlet or outlets is positioned in the base of the toilet bowl and configured to achieve a venturi effect capable of evacuating water and waste from the bowl,
 - 10 iii) providing water to the at least two top outlets for a predetermined period of time, and
 - iv) stopping the flow of water to the top outlets to complete the flush cycle once the bowl has been filled to the desired level.